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# Economics of Sawtimber Production in Appalachia, Ohio

R. W. SHERMAN

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
WOOSTER, OHIO

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## INTRODUCTION

Forest cover of various kinds comprises nearly half of that part of Southeastern Ohio included in the Appalachia area. With such a large area represented by forests, it seems desirable to make some kind of estimate of its possibilities in furnishing economic income to the area.

This publication is concerned with examining income which can be attributed to land and other investments necessary to production of trees. Expenses involved are: yearly labor costs, including fire protection; taxes; fencing; and interest on accumulated investment. Market value of land is assumed to be approximately the same after harvest and therefore its original cost is not included in total costs. All of these costs must be met by value of standing timber at harvest time or the owner will lose money from the production venture, assuming the only income is from trees sold for lumber.

If production of trees for lumber is accompanied by other income, this income can be included in calculating returns. Some such incomes can be measured but others might be almost impossible to measure in terms of monetary value. However, if the venture is one on which an investor must depend for a portion or all of his income, then only the money returns expected are important in a decision to enter or not enter into such a venture.

Since money income from other than timber products is not only difficult to predict and in most cases is nonexistent, this report is concerned only with the forest product itself in terms of sawtimber.

## LAND VALUE

All land on which timber will grow has some value. Since the aim of this publication is to determine the economic potential of timber in Southeastern Ohio counties, the price for which various qualities of land in that area would sell must be considered. It is necessary to start with bare land to show the effect of all costs involved in producing sawtimber trees. Assumptions in setting up cost tables are based on bare land values of $10, $20, $30, $40, and $50 per acre. It is doubtful that really productive forest land could be purchased at these prices but land much above these prices would probably be attracted into other uses.

Forest areas are not generally considered as being started from bare land. However, clear cutting[1] or even the area released by individual trees removed in selective cutting will mean that all new growth will be from bare land and will require the entire production time to produce another harvest on that area. Differences in total production per acre between "clear cutting" and "selective cutting" with whatever differences in cost are involved could be inserted in the tables with little difficulty. No published material was available on which to base such differences.

Anyone owning forest land or contemplating purchase eventually will be faced with production where the full life of trees is involved. Regardless of the price paid for partly developed forests, the costs of getting the forest to any particular stage have been an expense to someone. For this reason, a range is shown of costs involved at various ages in developing the forest area.

Whenever products from thinning can be sold above costs of cutting and marketing at various times to help defray costs, this income can be subtracted from accumulated costs at time of sale. Past experience indicates such net income is usually very low or nonexistent. Apparently the salvageable material in most cases will not pay more than the cost involved in putting it in marketable form and the cost of selling. However, demand in the future might make it possible to defray some costs by such sale. Generally such products return a very low wage for preparation and sale. The return is so low that only some salvage value for labor below normal wage levels can be expected unless and until prices for such products increase or harvest costs decrease.

## YEARLY COSTS

This category includes all costs other than those connected with original investment. It is difficult to imagine any costs per acre of less than $1 per year for even the bare essentials of fencing, taxes, and minimal fire protection. While it might be possible to remove part of the value of the forest land from the tax duplicate, this would amount to a subsidy. Subsidies are not included here as either income or as a cost reducer. Someone must bear these costs and the purpose here is to arrive at the economics of forestry as compared to other ventures, admitting that many other farm ventures are affected by subsidies of one kind or another. The land owner can, if he anticipates them, insert such subsidies in the tables in any way it may affect his venture. This

[1]Clear cutting is the removal of all trees in the area being harvested which would interfere with establishment of a good even-age stand from either planting or seeding. In selective cutting, only those trees deemed ready for harvest are removed.

publication shows how the venture would fare on its own, using competitive interest rates.

Yearly expenses were calculated on combinations of land values of $10, $20, $30, $40, and $50 per acre and yearly variable costs of $1, $2, $3, $4, and $5 per acre. Expenditures much above $2 per acre per year probably would provide more intensive management than needed for practical purposes but the higher figures are included to illustrate the burden which higher expenditures create.

Interest is calculated at 4 percent since this is approximately the competitive value from other investments. Planting costs are not included. If planting were done, its costs would be added to land value for purposes of cost calculations.

Tables 1, 2, and 3 show the accumulated costs incurred by the end of the stated year based on selected land values and yearly costs. Amounts shown in Table 3 are those which must be exceeded by net income from sales if the venture is to yield a profit.

Tables 4, 5, and 6 show the yearly costs for specific years. Value of added growth or quality improvement during that year must be sufficient to meet amounts shown in Table 6 if that year is to show a profit.

Effect of "land values" and "other costs" differing from those shown in the tables can be determined from Tables 1 and 2. For example, if land were valued at $65 per acre and other costs at $1.50 per year, the accumulated costs at 80 years would be (6.5 x $220) + (1.5 x $574) or $2291.

Added growth attributable to land quality would have to be worth the amount shown for each additional $10 land cost to pay for the additional cost of land. For example, if land devoted to forestry were valued at $100 per acre, it would require $2475.25 (5 x $495.05) added value of growth at 100 years to pay the extra cost of $100 land over $50 land. The compounded interest cost of land value cannot be escaped after the investment is made. Effect of increased increments in yearly variable costs (taxes, fencing, fire protection, and improvement practices) would be calculated in the same way.

Any change in land value at time of harvest could be added to or subtracted from accumulated costs in arriving at net income. Chances of any change of a significant nature in land values compared to accumulated costs are not very great. Such changes in land value probably would not result directly from timber production and could not be credited to forest product income.

## GROWTH AND PRICES NECESSARY FOR PROFIT

Tables 7, 8, 9, 10, and 11 show prices per 1,000 board feet (M.B.F.) necessary to pay total costs when a forest is harvested after 50, 60, 80, and 100 years' growth on five different site indices based on given yields[2]. Yield data were taken from Table 2 of U.S.D.A. Technical Bulletin No. 560, reprint of 1961, as calculated on International rule. Adjustments can be made from these tables for yields not included by using appropriate factors. For example, if the yields were 20 percent less than shown in the table, the prices would have to be increased by 25 percent.

Tables 12 through 18 show the growth necessary during specified years to pay that year's costs. Calculations were made with standing timber values from $20 to $80 per M.B.F.

Tables 19 through 25 show the accumulated growth of lumber necessary at various ages to pay costs accumulated to the end of stated years. In Tables 12 through 25, the necessity for growth which can be harvested at early dates becomes of paramount importance because of the amount involved in compound interest cost.

Most of the costs involved during the growing period are those of interest on all kinds of capital outlays. For example, if $40 land is used and other costs of $1 per year are involved, the interest at 4 percent would amount to $3168 or about 97 percent of accumulated costs at 100 years. At 50 years, it would be $354 or 87 percent of accumulated costs.

Most of the yield figures shown in Tables 19 through 25 are well beyond the growth possible for hardwoods on types of soils in Southeastern Ohio which might be used for forestry. So it appears that income must be realized from other than timber production in order to meet costs and leave something for profit. For instance, if trees could be brought to harvestable size in 50 years, it would require only 15,500 board feet at $30 per M.B.F. to meet costs on $50 land with $1 other costs per year. If income could be realized each year equal to all costs other than land investment, it would require 37,700 board feet at $30 per M.B.F. at 80 years to meet costs. With $50 land (which at 4 percent interest would bear yearly costs of $2 per acre) and a yearly outlay of $1 in addition to land costs, it would be possible to take care of all costs with a yearly net income of $3 per acre from other uses of the forest area. In that case, return from sale of standing timber would be net income.

[2]Effect of yields differing from those used for these tables on necessary prices is explained in footnote to Table 7.

## FINANCIAL MATURITY OF FOREST

Any forest land owner is faced with the problem of when to harvest the trees for maximum returns. Value of the products must be greater than the accumulated costs at the time of sale if a profit is to be realized. After a forest has developed to the place where a net profit is possible, then the decision as to when to harvest is simply that time when the added value of growth for a given period is not greater than the costs for that period and when little likelihood exists that the value of future increased growth will exceed future costs.

Table 26 shows the net income which would be possible from timber harvested at specified years. It is based on production as shown in U.S.D.A. Technical Bulletin No. 560, tables of accumulated costs, and various net prices per M.B.F. for standing timber. No price for standing timber below $20 per M.B.F. was considered because no net income seems possible at such prices, even considering the lowest production costs which could reasonably be considered.

Table 26 also indicates approximate "financial maturity" at the various costs and prices. No net income appears under $40 per M.B.F. for standing timber and then only for the best site and for costs (other than land) of less than $1 per acre per year. The pattern is much the same for all situations shown in Table 26 except for differences in net income or loss. For all combinations shown in the table, it appears that forests are "financially" mature by or before the 70th year. From then on, the value added by growth is less than costs and the forest has passed "financial maturity." These tables assume the same value per M.B.F. for logs regardless of size or age of tree.

Maturity calculations would be altered by using different values for timber per M.B.F., with quality increases coming from older and larger trees. However, no source of such value change was found on which to base differential value. Income would be changed by calculations using differential value due to quality differences by either lowering value of timber from smaller trees, raising it from larger trees, or a combination of both.

As shown in Table 26, it would take extremely high values of timber to justify holding much beyond 70 years. In fact, about the only kind of trees which would be profitable beyond 80 years would be those which develop into high value veneer logs. For example, on $50 land with $1 yearly costs, the accumulated costs at 100 years would be $3665.75. It would take more than 7,000 board feet at $500 per M.B.F. (only select veneer logs would qualify) to show a net profit or a combination of somewhat less than 7,000 board feet at this high price

plus other lumber at lower prices. At $50 per M.B.F., it would take more than 70,000 board feet to meet accumulated costs.

Table 26 assumes no subsidy such as relief from taxes or subsidized stand improvement work. Such subsidies would have to be deducted from expenses if they were received or contemplated. Calculations have not been made for timber land purchased as partially grown stands. For such purposes, the purchase cost could be considered as the accumulated costs up to that time. The advantage in this case would accrue to the purchaser if he were able to purchase at less than accumulated costs and land value. The loss would be borne by the seller.

## TIMBER STAND IMPROVEMENT COSTS

Costs of timber stand improvement work would normally be incurred during the early stages of growth. Therefore the cost plus interest by harvest date would be considerable. Assuming that a significant amount of improvement can be accomplished by the 30th year of growth and no improvement is necessary beyond that, the costs of various amounts incurred for work plus 4 percent interest at the 30th year would be as follows:

| Assumed Accumulated Costs at 30 years | Costs by End of Year | | | | | |
|---|---|---|---|---|---|---|
| | 50 | 60 | 70 | 80 | 90 | 100 |
| $10 | $ 21.91 | $ 32 43 | $ 48.01 | $ 71 07 | $105.20 | $155.72 |
| 20 | 43.82 | 64.86 | 96.02 | 142.14 | 210.40 | 311.44 |
| 30 | 65.73 | 97.29 | 144.03 | 213.21 | 315 60 | 467 16 |
| 40 | 87.64 | 129.72 | 192.04 | 284 28 | 420.80 | 622.88 |
| 50 | 109.55 | 162.15 | 240.05 | 355.35 | 526.00 | 778.60 |
| 60 | 131.46 | 194.58 | 288.06 | 426 42 | 731.20 | 934.32 |

Very few hours of work per acre could be performed and have less than $50 invested at the end of the 30th year. At the low wage rate of $1.25 per hour, if the work were performed equally at 10, 20, and 30 years, each $10 in accumulated costs at 30 years would have provided 1.75 hours of work per acre at each of the three periods. It would provide 48 minutes of work each fifth year until the 30th year—at the 5th, 10th, 15th, 20th, 25th, and 30th years. If improvement work was desirable each year of the first 30 years, it would be possible to devote 8.5 minutes per acre each year for each $10 of accumulated costs at the 30th year or 1 hour for each 7 acres each year.

With these expenditures, the amount of increased value of the timber per acre necessary to break even can be determined from the table above. For example, if it were desirable to devote 1 hour per year

for each 2 acres, the costs for each acre at the end of the first 30 years would be just over $35. The necessary added value would be half way between the lines for $30 and $40. At the end of the 80th year, such value added must amount to $368.20. Any particular values or costs can be calculated readily from compound interest tables.

These costs must be added to interest on land value and costs for fencing, fire protection, and taxes to arrive at total costs as of any given year.

## SUMMARY AND CONCLUSIONS

At present timber prices and with yields as typical of even the best of the area, it appears that production of sawtimber in Southeastern Ohio holds doubtful prospects for profit when all costs are included. However, by purchasing a stand of timber partly grown or writing off past costs of presently owned timberland, profit still might be possible. However, such profit will come largely because it was purchased far below actual costs already borne by someone. With a practice of clear cutting, the owner is then faced with starting (for all practical purposes) with bare land. Then all costs indicated in the accompanying tables will apply to the new forest area.

Apparently if an owner is anticipating a profit from production of timber in this area, he should plan on some kind of income from the forest area in addition to timber income. Such income might take the form of recreation or hunting, either on the part of the owner or for pay by others for use of the area.

Costs presented in Tables 1 and 2 demonstrate the importance of early maturity of trees for lumber use. This can be summarized by pointing out how accumulated costs increase. Assuming these accumulated costs at 100 years as 100 percent, the following percentages represent the comparative accumulations at various periods:

| | Accumulated Costs as Percent of Accumulated Costs at 100 Years |
|---|---|
| at 20 years | 2.5 |
| at 30 years | 4.6 |
| at 40 years | 7.7 |
| at 50 years | 12.4 |
| at 60 years | 19.3 |
| at 70 years | 29.4 |
| at 80 years | 44.6 |
| at 90 years | 67.0 |
| at 100 years | 100.0 |

This means that the growth at 100 years would have to be eight times as valuable as at 50 years, five times as great as at 60 years, and more than twice that at 80 years. This is clearly pictured in the table concerning net income at various prices and yields.

It is evident that emphasis must be placed on producing a mature or marketable tree in as short time as possible, even if the volume yield per acre is considerably less. A tree yielding 300 board feet of lumber at 60 years is much more profitable than one with 600 or even 1000 board feet at 100 years unless quality differences are very great. This might occur with production of high quality veneer logs. There is apparently no proof that even good quality veneer logs cannot be produced at earlier maturity dates than 100 years. The accomplishment of early maturity of trees should be the object of concentrated research.

**TABLE 1.—Accumulated Interest Cost per Acre for Land at Various Prices at Specified Years, 4 Percent Interest* (to Nearest Dollar).**

| Price per Acre | End of Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $10 | $ 5 | $12 | $ 22 | $ 38 | $ 61 | $ 95 | $220 | $495 |
| 20 | 10 | 24 | 45 | 76 | 122 | 190 | 441 | 990 |
| 30 | 14 | 36 | 67 | 114 | 183 | 286 | 661 | 1485 |
| 40 | 19 | 48 | 90 | 152 | 244 | 381 | 882 | 1980 |
| 50 | 24 | 60 | 112 | 190 | 305 | 476 | 1102 | 2475 |

*If 5% interest rate was used rather than 4%, the accumulated interest cost on land investment would be 58.9% greater at 40 years, 71.4% at 50 years, 85.7% at 60 years, 120.2% at 80 years, and 163.6% at 100 years.

**TABLE 2.—Accumulated Cost per Acre for Annual Recurring Costs* Other Than for Land, 4 Percent Interest† (to Nearest Dollar).**

| Yearly Costs per Acre | End of Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $1 | $12 | $ 31 | $ 58 | $ 99 | $159 | $ 248 | $ 573 | $1287 |
| 2 | 25 | 62 | 117 | 198 | 318 | 495 | 1147 | 2574 |
| 3 | 37 | 93 | 175 | 296 | 476 | 743 | 1720 | 3861 |
| 4 | 50 | 124 | 233 | 395 | 635 | 990 | 2293 | 5149 |
| 5 | 62 | 155 | 292 | 494 | 794 | 1238 | 2866 | 6436 |

*Interest on these costs was assumed to start in the year costs occurred.

†If 5% interest rate was used rather than 4%, the accumulated cost would be 28.3% greater at 40 years, 38.4% greater at 50 years, 50.0% greater at 60 years, 77.9% greater at 80 years, and 112.2% greater at 100 years.

**TABLE 3.—Accumulated Costs of Various Combinations of Land Value and Other Yearly Costs, 4 Percent Interest (to Nearest Dollar).**

| Land Value per Acre | Other Yearly Costs per Acre | | End of Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $10 | $1 | | $17 | $ 43 | $ 80 | $ 137 | $ 220 | $ 343 | $ 793 | $1782 |
| 10 | 2 | | 30 | 74 | 139 | 236 | 379 | 590 | 1368 | 3069 |
| 10 | 3 | First 30 Years $1 thereafter | 43 | 105 | 197 | 309 | 475 | 721 | 1622 | 3600 |
| 10 | 3 | 2 | 43 | 105 | 197 | 322 | 506 | 780 | 1781 | 3978 |
| 10 | 4 | 1 | 55 | 136 | 255 | 396 | 603 | 910 | 2038 | 4509 |
| 10 | 4 | 2 | 55 | 136 | 255 | 408 | 634 | 968 | 2196 | 4887 |
| 10 | 5 | 1 | 67 | 168 | 314 | 482 | 731 | 1100 | 2452 | 5419 |
| 10 | 5 | 2 | 67 | 168 | 314 | 495 | 762 | 1158 | 2611 | 5797 |
| 20 | 1 | | 22 | 55 | 103 | 175 | 281 | 438 | 1014 | 2277 |
| 20 | 2 | | 35 | 86 | 162 | 274 | 440 | 685 | 1589 | 3564 |
| 20 | 3 | First 30 Years $1 thereafter | 47 | 117 | 220 | 347 | 536 | 816 | 1843 | 4095 |
| 20 | 3 | 2 | 47 | 117 | 220 | 360 | 567 | 875 | 2002 | 4473 |
| 20 | 4 | 1 | 60 | 148 | 278 | 434 | 664 | 1005 | 2259 | 5004 |
| 20 | 4 | 2 | 60 | 148 | 278 | 446 | 695 | 1063 | 2417 | 5382 |
| 20 | 5 | 1 | 72 | 179 | 337 | 520 | 792 | 1195 | 2673 | 5914 |
| 20 | 5 | 2 | 72 | 179 | 337 | 533 | 823 | 1253 | 2832 | 6292 |
| 30 | 1 | | 27 | 67 | 125 | 213 | 342 | 534 | 1234 | 2772 |
| 30 | 2 | | 39 | 98 | 184 | 312 | 501 | 781 | 1809 | 4059 |
| 30 | 3 | First 30 Years $1 thereafter | 52 | 129 | 242 | 385 | 597 | 912 | 2063 | 4590 |
| 30 | 3 | 2 | 52 | 129 | 242 | 398 | 628 | 971 | 2222 | 4968 |
| 30 | 4 | 1 | 64 | 160 | 300 | 472 | 725 | 1101 | 2479 | 5499 |
| 30 | 4 | 2 | 64 | 160 | 300 | 484 | 756 | 1159 | 2637 | 5877 |
| 30 | 5 | 1 | 77 | 191 | 359 | 558 | 853 | 1291 | 2893 | 6409 |
| 30 | 5 | 2 | 77 | 191 | 359 | 571 | 884 | 1349 | 3052 | 6787 |

**TABLE 3. (Continued)—Accumulated Costs of Various Combinations of Land Value and Other Yearly Costs, 4 Percent Interest (to Nearest Dollar).**

| Land Value per Acre | Other Yearly Costs per Acre | | End of Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $40 | $1 | | $32 | $ 79 | $148 | $251 | $ 403 | $ 629 | $1455 | $3267 |
| 40 | 2 | | 44 | 110 | 207 | 350 | 562 | 876 | 2030 | 4554 |
| 40 | 3 | First 30 Years $1 thereafter | 57 | 141 | 265 | 423 | 658 | 1007 | 2284 | 5085 |
| 40 | 3 | 2 | 57 | 141 | 265 | 436 | 689 | 1066 | 2443 | 5463 |
| 40 | 4 | 1 | 69 | 172 | 323 | 510 | 786 | 1196 | 2700 | 5994 |
| 40 | 4 | 2 | 69 | 172 | 323 | 522 | 817 | 1254 | 2858 | 6372 |
| 40 | 5 | 1 | 82 | 203 | 382 | 596 | 914 | 1386 | 3114 | 6904 |
| 40 | 5 | 2 | 82 | 203 | 382 | 609 | 945 | 1444 | 3273 | 7282 |
| 50 | 1 | | 37 | 91 | 170 | 289 | 464 | 724 | 1675 | 3762 |
| 50 | 2 | | 50 | 122 | 229 | 388 | 623 | 971 | 2250 | 5049 |
| 50 | 3 | First 30 Years $1 thereafter | 62 | 153 | 287 | 461 | 719 | 1102 | 2504 | 5580 |
| 50 | 3 | 2 | 62 | 153 | 287 | 474 | 750 | 1161 | 2663 | 5958 |
| 50 | 4 | 1 | 74 | 184 | 345 | 548 | 847 | 1291 | 2920 | 6489 |
| 50 | 4 | 2 | 74 | 184 | 345 | 560 | 878 | 1349 | 3078 | 6867 |
| 50 | 5 | 1 | 86 | 215 | 404 | 634 | 975 | 1481 | 3334 | 7399 |
| 50 | 5 | 2 | 86 | 215 | 404 | 647 | 1006 | 1539 | 3493 | 7777 |

**TABLE 4.—Interest Cost per Acre for Specified Years for Land at Various Prices, 4 Percent Interest.***

| Price per Acre | Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $10 | $ .57 | $ .84 | $1.25 | $1.85 | $ 2.73 | $ 4.05 | $ 8.87 | $19.42 |
| 20 | 1.14 | 1.69 | 2.49 | 3.69 | 5.47 | 8.09 | 17.73 | 38.85 |
| 30 | 1.71 | 2.53 | 3.74 | 5.54 | 8.20 | 12.14 | 26.60 | 58.27 |
| 40 | 2.28 | 3.37 | 4.99 | 7.38 | 10.93 | 16.19 | 35.47 | 77.70 |
| 50 | 2.85 | 4.21 | 6.24 | 9.23 | 13.67 | 20.23 | 44.33 | 97.12 |

*If 5% rate was used rather than 4%, the yearly cost would be 81.6% greater at 40 years, 99.8% greater at 50 years, 179.8% greater at 60 years, 166.2% greater at 80 years, and 222.4% greater at 100 years.

**TABLE 5.—Annual Outlay Plus Interest on Past Annual Outlays for Specified Years, 4 Percent Interest.***

| Yearly Costs per Acre | Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $1.00 | $1.42 | $ 2.11 | $ 3.12 | $ 4.62 | $ 6.83 | $10.11 | $ 22.16 | $ 48.56 |
| 2.00 | 2.85 | 4.21 | 6.24 | 9.23 | 13.67 | 20.23 | 44.33 | 97.12 |
| 3.00 | 4.27 | 6.32 | 9.36 | 13.85 | 20.50 | 30.34 | 66.49 | 145.69 |
| 4.00 | 5.69 | 8.43 | 12.47 | 18.47 | 27.33 | 40.46 | 88.65 | 194.25 |
| 5.00 | 7.12 | 10.53 | 15.59 | 23.08 | 34.17 | 50.57 | 110.82 | 242.80 |

*If 5% rate was used rather than 4%, the yearly cost would be 45.2% greater at 40 years, 60.2% greater at 50 years, 75.9% greater at 60 years, 112.9% greater at 80 years, and 157.9% greater at 100 years.

## TABLE 6.—Costs for Specified Years for Various Combinations of Expenses, 4 Percent Interest.

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $10 | $1 | | $1.99 | $ 2.95 | $ 4.37 | $ 6.47 | $ 9.56 | $14.16 | $ 31.03 | $ 67.98 |
| 10 | 2 | | 3.42 | 5.05 | 7.49 | 11.08 | 16.40 | 24.28 | 53.20 | 116.56 |
| 10 | 3 | First 30 Years $1 thereafter | 4.84 | 7.16 | 10.61 | 12.85 | 19.02 | 28.15 | 61.69 | 133.97 |
| 10 | 3 | 2 | 4.84 | 7.16 | 10.61 | 14.28 | 21.12 | 31.27 | 68.53 | 149.54 |
| 10 | 4 | 1 | 6.26 | 9.27 | 13.72 | 16.05 | 23.74 | 35.15 | 77.02 | 166.96 |
| 10 | 4 | 2 | 6.26 | 9.27 | 13.72 | 17.47 | 25.85 | 38.27 | 83.85 | 182.53 |
| 10 | 5 | 1 | 7.69 | 11.37 | 16.84 | 19.24 | 28.47 | 42.15 | 112.36 | 199.94 |
| 10 | 5 | 2 | 7.69 | 11.37 | 16.84 | 20.66 | 30.58 | 45.26 | 119.19 | 215.51 |
| 20 | 1 | | 2.56 | 3.80 | 5.61 | 8.31 | 12.30 | 18.20 | 39.89 | 87.41 |
| 20 | 2 | | 3.99 | 5.90 | 8.73 | 12.92 | 19.14 | 28.32 | 62.06 | 135.99 |
| 20 | 3 | First 30 Years $1 thereafter | 5.41 | 8.01 | 11.85 | 14.69 | 21.76 | 32.19 | 70.55 | 153.40 |
| 20 | 3 | 2 | 5.41 | 8.01 | 11.85 | 16.12 | 23.86 | 35.31 | 77.39 | 168.97 |
| 20 | 4 | 1 | 6.83 | 10.12 | 14.96 | 17.89 | 26.48 | 39.19 | 85.88 | 186.39 |
| 20 | 4 | 2 | 6.83 | 10.12 | 14.96 | 19.31 | 28.59 | 42.31 | 92.61 | 201.96 |
| 20 | 5 | 1 | 8.26 | 12.22 | 18.08 | 21.08 | 31.21 | 46.19 | 101.22 | 219.37 |
| 20 | 5 | 2 | 8.26 | 12.22 | 18.08 | 22.50 | 33.32 | 49.30 | 108.05 | 234.94 |
| 30 | 1 | | 3.13 | 4.64 | 6.86 | 10.16 | 15.03 | 22.25 | 48.76 | 106.83 |
| 30 | 2 | | 4.56 | 6.74 | 9.98 | 14.77 | 21.87 | 32.37 | 70.93 | 155.39 |
| 30 | 3 | First 30 Years $1 thereafter | 5.98 | 8.85 | 13.10 | 16.54 | 24.49 | 36.24 | 79.42 | 172.82 |
| 30 | 3 | 2 | 5.98 | 8.85 | 13.10 | 17.97 | 26.59 | 39.36 | 86.26 | 188.39 |
| 30 | 4 | 1 | 7.40 | 10.96 | 16.21 | 19.74 | 29.21 | 43.24 | 94.75 | 205.81 |
| 30 | 4 | 2 | 7.40 | 10.96 | 16.21 | 21.16 | 31.32 | 46.36 | 101.58 | 221.38 |
| 30 | 5 | 1 | 8.83 | 13.06 | 19.33 | 22.93 | 33.94 | 50.24 | 110.09 | 238.79 |
| 30 | 5 | 2 | 8.83 | 13.06 | 19.33 | 24.35 | 36.05 | 53.35 | 116.92 | 254.36 |

**TABLE 6. (Continued)—Costs for Specified Years for Various Combinations of Expenses, 4 Percent Interest.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| $40 | $1 | | $3.70 | $ 5.48 | $ 8.11 | $12.00 | $17.76 | $26.30 | $ 57.63 | $126.26 |
| 40 | 2 | | 5.13 | 7.58 | 11.23 | 16.61 | 24.60 | 36.42 | 79.80 | 174.82 |
| 40 | 3 | First 30 Years $1 thereafter | 6.55 | 9.69 | 14.35 | 18.38 | 27.22 | 40.29 | 88.29 | 192.25 |
| 40 | 3 | 2 | 6.55 | 9.69 | 14.35 | 19.81 | 29.32 | 43.41 | 95.13 | 207.82 |
| 40 | 4 | 1 | 7.97 | 11.80 | 17.46 | 21.58 | 31.94 | 47.29 | 103.62 | 225.24 |
| 40 | 4 | 2 | 7.97 | 11.80 | 17.46 | 23.00 | 34.05 | 50.41 | 110.45 | 240.84 |
| 40 | 5 | 1 | 9.40 | 13.90 | 20.58 | 24.77 | 36.67 | 54.29 | 118.96 | 258.22 |
| 40 | 5 | 2 | 9.40 | 13.90 | 20.58 | 26.19 | 38.78 | 57.40 | 125.79 | 273.79 |
| 50 | 1 | | 4.27 | 6.32 | 9.36 | 13.85 | 20.50 | 30.34 | 66.49 | 145.68 |
| 50 | 2 | | 5.70 | 8.42 | 12.48 | 18.46 | 27.34 | 40.46 | 88.66 | 194.24 |
| 50 | 3 | First 30 Years $1 thereafter | 7.12 | 10.53 | 15.60 | 20.23 | 29.96 | 44.33 | 97.15 | 211.67 |
| 50 | 3 | 2 | 7.12 | 10.53 | 15.60 | 21.66 | 32.06 | 47.45 | 103.99 | 227.24 |
| 50 | 4 | 1 | 8.54 | 12.64 | 18.71 | 23.43 | 34.68 | 51.33 | 112.48 | 244.66 |
| 50 | 4 | 2 | 8.54 | 12.64 | 18.71 | 24.85 | 36.79 | 54.45 | 119.31 | 260.23 |
| 50 | 5 | 1 | 9.97 | 14.74 | 21.83 | 26.62 | 39.41 | 58.33 | 127.82 | 277.64 |
| 50 | 5 | 2 | 9.97 | 14.74 | 21.83 | 28.04 | 41.52 | 61.44 | 134.65 | 293.21 |

**TABLE 7.—Necessary Price per M.B.F. on Stump to Return All Costs, 4 Percent Interest. Yields Based on U.S.D.A. Technical Bulletin No. 560, International Rule.***

| Land Value per Acre | Other Yearly Costs per Acre | Site Index 40† Age at Harvest 50 Years | 60 Years | 80 Years | 100 Years |
|---|---|---|---|---|---|
| $10 | $0 | $ 44 | $ 35 | $ 37 | $ 54 |
| 10 | 1 | 158 | 127 | 135 | 194 |
| 10 | 2 | 272 | 219 | 232 | 334 |
| 10 | 3 | 386 | 311 | 329 | 474 |
| 10 | 4 | 500 | 403 | 427 | 614 |
| 10 | 5 | 614 | 495 | 524 | 754 |
| 20 | 0 | 87 | 70 | 75 | 108 |
| 20 | 1 | 201 | 162 | 172 | 248 |
| 20 | 2 | 315 | 254 | 269 | 388 |
| 20 | 3 | 430 | 346 | 367 | 528 |
| 20 | 4 | 544 | 438 | 464 | 668 |
| 20 | 5 | 658 | 530 | 561 | 808 |
| 30 | 0 | 131 | 106 | 112 | 161 |
| 30 | 1 | 245 | 198 | 209 | 301 |
| 30 | 2 | 359 | 290 | 307 | 441 |
| 30 | 3 | 473 | 382 | 404 | 581 |
| 30 | 4 | 587 | 474 | 501 | 721 |
| 30 | 5 | 701 | 566 | 599 | 861 |
| 40 | 0 | 174 | 141 | 149 | 216 |
| 40 | 1 | 288 | 233 | 247 | 356 |
| 40 | 2 | 403 | 325 | 344 | 496 |
| 40 | 3 | 517 | 417 | 441 | 636 |
| 40 | 4 | 631 | 509 | 539 | 776 |
| 40 | 5 | 745 | 601 | 636 | 916 |
| 50 | 0 | 218 | 176 | 187 | 269 |
| 50 | 1 | 332 | 268 | 284 | 409 |
| 50 | 2 | 446 | 360 | 382 | 549 |
| 50 | 3 | 560 | 452 | 479 | 689 |
| 50 | 4 | 674 | 545 | 576 | 829 |
| 50 | 5 | 789 | 637 | 674 | 969 |

*Any yields differing from these could be adjusted by appropriate amount. For example, if improvement work resulted in 20% more timber at 80 years, the figures in that column would be adjusted by dividing by 1.2, resulting in a decrease of 1/6 in necessary price.

†Height attained by average dominant and codominant oak at the age of 50 years.

**TABLE 8.—Necessary Price per M.B.F. on Stump to Return All Costs, 4 Percent Interest. Yields Based on U.S.D.A. Technical Bulletin No. 560, International Rule.***

| Land Value per Acre | Other Yearly Costs per Acre | Site Index 50† Age at Harvest 50 Years | 60 Years | 80 Years | 100 Years |
|---|---|---|---|---|---|
| $10 | $0 | $ 19 | $ 17 | $ 21 | $ 34 |
| 10 | 1 | 68 | 62 | 76 | 121 |
| 10 | 2 | 117 | 106 | 131 | 209 |
| 10 | 3 | 166 | 151 | 186 | 297 |
| 10 | 4 | 215 | 195 | 241 | 384 |
| 10 | 5 | 265 | 240 | 296 | 472 |
| 20 | 0 | 38 | 34 | 42 | 67 |
| 20 | 1 | 87 | 78 | 97 | 155 |
| 20 | 2 | 136 | 122 | 152 | 243 |
| 20 | 3 | 185 | 167 | 207 | 330 |
| 20 | 4 | 234 | 211 | 262 | 418 |
| 20 | 5 | 283 | 255 | 317 | 505 |
| 30 | 0 | 56 | 51 | 63 | 101 |
| 30 | 1 | 105 | 95 | 118 | 189 |
| 30 | 2 | 155 | 140 | 173 | 276 |
| 30 | 3 | 204 | 184 | 228 | 364 |
| 30 | 4 | 253 | 228 | 283 | 452 |
| 30 | 5 | 302 | 273 | 338 | 539 |
| 40 | 0 | 75 | 68 | 84 | 135 |
| 40 | 1 | 124 | 112 | 139 | 223 |
| 40 | 2 | 173 | 157 | 194 | 310 |
| 40 | 3 | 223 | 201 | 249 | 398 |
| 40 | 4 | 272 | 245 | 304 | 485 |
| 40 | 5 | 321 | 290 | 359 | 573 |
| 50 | 0 | 94 | 85 | 105 | 168 |
| 50 | 1 | 143 | 129 | 160 | 256 |
| 50 | 2 | 192 | 174 | 215 | 343 |
| 50 | 3 | 241 | 218 | 270 | 431 |
| 50 | 4 | 290 | 263 | 325 | 519 |
| 50 | 5 | 340 | 307 | 380 | 606 |

*See footnote to Table 7.
†Height attained by average dominant and codominant oak at the age of 50 years.

**TABLE 9.—Necessary Price per M.B.F. on Stump to Return All Costs, 4 Percent Interest. Yields Based on U.S.D.A. Technical Bulletin No. 560, International Rule.***

| Land Value per Acre | Other Yearly Costs per Acre | Site Index 60† Age at Harvest 50 Years | 60 Years | 80 Years | 100 Years |
|---|---|---|---|---|---|
| $10 | $0 | $ 10 | $ 10 | $ 14 | $ 24 |
| 10 | 1 | 35 | 35 | 51 | 85 |
| 10 | 2 | 60 | 61 | 87 | 147 |
| 10 | 3 | 86 | 87 | 124 | 209 |
| 10 | 4 | 111 | 112 | 161 | 270 |
| 10 | 5 | 136 | 138 | 198 | 332 |
| 20 | 0 | 19 | 20 | 28 | 47 |
| 20 | 1 | 45 | 45 | 65 | 109 |
| 20 | 2 | 70 | 71 | 102 | 171 |
| 20 | 3 | 95 | 96 | 138 | 232 |
| 20 | 4 | 121 | 122 | 175 | 294 |
| 20 | 5 | 146 | 147 | 212 | 356 |
| 30 | 0 | 29 | 29 | 42 | 71 |
| 30 | 1 | 54 | 55 | 79 | 133 |
| 30 | 2 | 80 | 81 | 116 | 194 |
| 30 | 3 | 105 | 106 | 153 | 256 |
| 30 | 4 | 130 | 132 | 190 | 318 |
| 30 | 5 | 156 | 157 | 226 | 379 |
| 40 | 0 | 39 | 39 | 56 | 95 |
| 40 | 1 | 64 | 65 | 93 | 156 |
| 40 | 2 | 89 | 90 | 130 | 218 |
| 40 | 3 | 116 | 116 | 166 | 280 |
| 40 | 4 | 141 | 142 | 203 | 341 |
| 40 | 5 | 167 | 167 | 240 | 403 |
| 50 | 0 | 48 | 49 | 70 | 118 |
| 50 | 1 | 74 | 75 | 107 | 180 |
| 50 | 2 | 99 | 100 | 144 | 241 |
| 50 | 3 | 124 | 126 | 180 | 303 |
| 50 | 4 | 150 | 152 | 217 | 365 |
| 50 | 5 | 175 | 177 | 254 | 427 |

*See footnote to Table 7

†Height attained by average dominant and codominant oak at the age of 50 years

**TABLE 10.—Necessary Price per M.B.F. on Stump to Return All Costs, 4 Percent Interest. Yields Based on U.S.D.A. Technical Bulletin No. 560, International Rule.***

| Land Value per Acre | Other Yearly Costs per Acre | Site Index 70† Age at Harvest 50 Years | 60 Years | 80 Years | 100 Years |
|---|---|---|---|---|---|
| $10 | $0 | $ 6 | $ 7 | $ 10 | $ 18 |
| 10 | 1 | 23 | 25 | 37 | 64 |
| 10 | 2 | 39 | 43 | 65 | 111 |
| 10 | 3 | 55 | 60 | 92 | 158 |
| 10 | 4 | 72 | 78 | 119 | 204 |
| 10 | 5 | 88 | 96 | 146 | 251 |
| 20 | 0 | 12 | 14 | 21 | 36 |
| 20 | 1 | 29 | 32 | 48 | 82 |
| 20 | 2 | 45 | 49 | 75 | 129 |
| 20 | 3 | 62 | 67 | 102 | 176 |
| 20 | 4 | 78 | 85 | 129 | 222 |
| 20 | 5 | 94 | 103 | 156 | 269 |
| 30 | 0 | 19 | 20 | 31 | 54 |
| 30 | 1 | 35 | 38 | 58 | 100 |
| 30 | 2 | 52 | 56 | 85 | 147 |
| 30 | 3 | 68 | 74 | 112 | 193 |
| 30 | 4 | 84 | 92 | 139 | 240 |
| 30 | 5 | 101 | 110 | 167 | 287 |
| 40 | 0 | 25 | 27 | 41 | 72 |
| 40 | 1 | 41 | 45 | 69 | 118 |
| 40 | 2 | 58 | 63 | 96 | 165 |
| 40 | 3 | 74 | 81 | 123 | 211 |
| 40 | 4 | 91 | 99 | 150 | 258 |
| 40 | 5 | 107 | 117 | 177 | 305 |
| 50 | 0 | 31 | 34 | 52 | 90 |
| 50 | 1 | 48 | 52 | 79 | 136 |
| 50 | 2 | 64 | 70 | 106 | 183 |
| 50 | 3 | 80 | 88 | 133 | 229 |
| 50 | 4 | 97 | 106 | 160 | 276 |
| 50 | 5 | 113 | 124 | 187 | 322 |

*See footnote to Table 7

†Height attained by average dominant and codominant oak at the age of 50 years

**TABLE 11.—Necessary Price per M.B.F. on Stump to Return All Costs, 4 Percent Interest. Yields Based on U.S.D.A. Technical Bulletin No. 560, International Rule.***

| Land Value per Acre | Other Yearly Costs per Acre | Site Index 80† Age at Harvest 50 Years | 60 Years | 80 Years | 100 Years |
|---|---|---|---|---|---|
| $10 | $0 | $ 4 | $ 5 | $ 8 | $ 14 |
| 10 | 1 | 16 | 18 | 29 | 52 |
| 10 | 2 | 28 | 32 | 50 | 89 |
| 10 | 3 | 39 | 45 | 71 | 127 |
| 10 | 4 | 51 | 59 | 92 | 164 |
| 10 | 5 | 62 | 72 | 113 | 202 |
| 20 | 0 | 9 | 10 | 16 | 29 |
| 20 | 1 | 20 | 24 | 37 | 66 |
| 20 | 2 | 32 | 37 | 58 | 104 |
| 20 | 3 | 44 | 50 | 79 | 141 |
| 20 | 4 | 55 | 64 | 100 | 179 |
| 20 | 5 | 67 | 77 | 121 | 216 |
| 30 | 0 | 13 | 15 | 24 | 43 |
| 30 | 1 | 25 | 29 | 45 | 81 |
| 30 | 2 | 37 | 42 | 66 | 118 |
| 30 | 3 | 48 | 55 | 87 | 155 |
| 30 | 4 | 60 | 69 | 108 | 193 |
| 30 | 5 | 71 | 82 | 130 | 230 |
| 40 | 0 | 18 | 20 | 32 | 58 |
| 40 | 1 | 29 | 34 | 53 | 95 |
| 40 | 2 | 41 | 47 | 74 | 132 |
| 40 | 3 | 53 | 60 | 95 | 170 |
| 40 | 4 | 64 | 74 | 117 | 207 |
| 40 | 5 | 76 | 87 | 138 | 245 |
| 50 | 0 | 22 | 25 | 40 | 72 |
| 50 | 1 | 34 | 39 | 61 | 109 |
| 50 | 2 | 45 | 52 | 82 | 147 |
| 50 | 3 | 57 | 66 | 103 | 184 |
| 50 | 4 | 69 | 79 | 125 | 222 |
| 50 | 5 | 80 | 92 | 146 | 259 |

*See footnote to Table 7

†Height attained by average dominant and codominant oak at the age of 50 years.

**TABLE 12.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $20 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 62 | 92 | 136 | 202 | 443 | 971 |
| 10 | 1 | | 218 | 323 | 478 | 708 | 1551 | 3399 |
| 10 | 2 | | 374 | 554 | 820 | 1214 | 2660 | 5828 |
| 10 | 3 | First 30 Years $1 thereafter | 530 | 642 | 951 | 1407 | 3084 | 6698 |
| 20 | 0 | | 125 | 184 | 273 | 404 | 886 | 1942 |
| 20 | 1 | | 280 | 415 | 615 | 910 | 1994 | 4370 |
| 20 | 2 | | 436 | 646 | 957 | 1416 | 3103 | 6799 |
| 20 | 3 | First 30 Years $1 thereafter | 592 | 734 | 1088 | 1609 | 3527 | 7670 |
| 30 | 0 | | 187 | 277 | 410 | 607 | 1330 | 2913 |
| 30 | 1 | | 343 | 508 | 751 | 1112 | 2438 | 5341 |
| 30 | 2 | | 499 | 738 | 1093 | 1618 | 3546 | 7769 |
| 30 | 3 | First 30 Years $1 thereafter | 655 | 827 | 1224 | 1812 | 3971 | 8641 |
| 40 | 0 | | 249 | 369 | 546 | 809 | 1773 | 3885 |
| 40 | 1 | | 405 | 600 | 888 | 1315 | 2881 | 6313 |
| 40 | 2 | | 561 | 830 | 1230 | 1821 | 3990 | 8741 |
| 40 | 3 | First 30 Years $1 thereafter | 717 | 919 | 1361 | 2014 | 4414 | 9612 |
| 50 | 0 | | 312 | 461 | 683 | 1012 | 2216 | 4856 |
| 50 | 1 | | 468 | 692 | 1025 | 1517 | 3324 | 7284 |
| 50 | 2 | | 624 | 923 | 1367 | 2023 | 4433 | 9712 |
| 50 | 3 | First 30 Years $1 thereafter | 780 | 1011 | 1498 | 2216 | 4857 | 10583 |

**TABLE 13.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $30 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 42 | 62 | 91 | 135 | 296 | 647 |
| 10 | 1 | | 146 | 216 | 319 | 472 | 1034 | 2266 |
| 10 | 2 | | 250 | 369 | 547 | 809 | 1773 | 3885 |
| 10 | 3 | First 30 Years $1 thereafter | 354 | 428 | 634 | 938 | 2056 | 4466 |
| 20 | 0 | | 83 | 123 | 182 | 270 | 591 | 1295 |
| 20 | 1 | | 187 | 277 | 410 | 607 | 1330 | 2914 |
| 20 | 2 | | 291 | 431 | 638 | 944 | 2069 | 4533 |
| 20 | 3 | First 30 Years $1 thereafter | 395 | 490 | 725 | 1073 | 2352 | 5113 |
| 30 | 0 | | 125 | 185 | 273 | 405 | 887 | 1942 |
| 30 | 1 | | 229 | 339 | 501 | 742 | 1625 | 3561 |
| 30 | 2 | | 333 | 492 | 729 | 1079 | 2364 | 5180 |
| 30 | 3 | First 30 Years $1 thereafter | 437 | 551 | 816 | 1208 | 2647 | 5761 |
| 40 | 0 | | 166 | 246 | 364 | 540 | 1182 | 2590 |
| 40 | 1 | | 270 | 400 | 592 | 877 | 1921 | 4209 |
| 40 | 2 | | 374 | 554 | 820 | 1214 | 2660 | 5827 |
| 40 | 3 | First 30 Years $1 thereafter | 478 | 613 | 907 | 1343 | 2943 | 6408 |
| 50 | 0 | | 208 | 308 | 456 | 674 | 1478 | 3237 |
| 50 | 1 | | 312 | 462 | 683 | 1011 | 2216 | 4856 |
| 50 | 2 | | 416 | 615 | 911 | 1349 | 2955 | 6475 |
| 50 | 3 | First 30 Years $1 thereafter | 520 | 674 | 999 | 1478 | 3238 | 7056 |

**TABLE 14.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $40 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 31 | 46 | 68 | 101 | 222 | 485 |
| 10 | 1 | | 109 | 162 | 239 | 354 | 776 | 1699 |
| 10 | 2 | | 187 | 277 | 410 | 607 | 1330 | 2914 |
| 10 | 3 | First 30 Years $1 thereafter | 265 | 321 | 475 | 704 | 1542 | 3349 |
| 20 | 0 | | 62 | 92 | 137 | 202 | 443 | 971 |
| 20 | 1 | | 140 | 208 | 307 | 455 | 997 | 2185 |
| 20 | 2 | | 218 | 323 | 478 | 708 | 1551 | 3400 |
| 20 | 3 | First 30 Years $1 thereafter | 296 | 367 | 544 | 805 | 1764 | 3835 |
| 30 | 0 | | 93 | 138 | 205 | 303 | 665 | 1457 |
| 30 | 1 | | 171 | 254 | 376 | 556 | 1219 | 2671 |
| 30 | 2 | | 249 | 369 | 547 | 809 | 1773 | 3885 |
| 30 | 3 | First 30 Years $1 thereafter | 327 | 413 | 612 | 906 | 1985 | 4320 |
| 40 | 0 | | 125 | 184 | 273 | 405 | 887 | 1942 |
| 40 | 1 | | 203 | 300 | 444 | 657 | 1441 | 3156 |
| 40 | 2 | | 281 | 415 | 615 | 910 | 1995 | 4370 |
| 40 | 3 | First 30 Years $1 thereafter | 359 | 459 | 680 | 1007 | 2207 | 4806 |
| 50 | 0 | | 156 | 231 | 342 | 506 | 1108 | 2428 |
| 50 | 1 | | 234 | 346 | 512 | 758 | 1662 | 3642 |
| 50 | 2 | | 312 | 461 | 683 | 1011 | 2216 | 4856 |
| 50 | 3 | First 30 Years $1 thereafter | 390 | 506 | 749 | 1108 | 2429 | 5292 |

**TABLE 15.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $50 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 25 | 37 | 55 | 81 | 177 | 388 |
| 10 | 1 | | 87 | 129 | 191 | 283 | 621 | 1360 |
| 10 | 2 | | 150 | 222 | 328 | 486 | 1064 | 2331 |
| 10 | 3 | First 30 Years $1 thereafter | 212 | 257 | 380 | 563 | 1234 | 2679 |
| 20 | 0 | | 50 | 74 | 109 | 162 | 355 | 777 |
| 20 | 1 | | 112 | 166 | 246 | 364 | 798 | 1748 |
| 20 | 2 | | 175 | 258 | 383 | 566 | 1241 | 2720 |
| 20 | 3 | First 30 Years $1 thereafter | 237 | 294 | 435 | 644 | 1411 | 3068 |
| 30 | 0 | | 75 | 111 | 164 | 243 | 532 | 1165 |
| 30 | 1 | | 137 | 203 | 301 | 445 | 975 | 2137 |
| 30 | 2 | | 200 | 295 | 437 | 647 | 1419 | 3108 |
| 30 | 3 | First 30 Years $1 thereafter | 262 | 331 | 490 | 725 | 1588 | 3456 |
| 40 | 0 | | 100 | 148 | 219 | 324 | 709 | 1554 |
| 40 | 1 | | 162 | 240 | 355 | 526 | 1153 | 2525 |
| 40 | 2 | | 225 | 332 | 492 | 728 | 1596 | 3496 |
| 40 | 3 | First 30 Years $1 thereafter | 287 | 368 | 544 | 806 | 1766 | 3845 |
| 50 | 0 | | 125 | 185 | 273 | 405 | 887 | 1942 |
| 50 | 1 | | 187 | 277 | 410 | 607 | 1330 | 2914 |
| 50 | 2 | | 250 | 369 | 547 | 809 | 1773 | 3885 |
| 50 | 3 | First 30 Years $1 thereafter | 312 | 405 | 599 | 887 | 1943 | 4233 |

**TABLE 16.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $60 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 21 | 31 | 45 | 67 | 148 | 324 |
| 10 | 1 | | 73 | 108 | 159 | 236 | 517 | 1133 |
| 10 | 2 | | 125 | 185 | 273 | 405 | 887 | 1943 |
| 10 | 3 | First 30 Years $1 thereafter | 177 | 214 | 317 | 469 | 1028 | 2233 |
| 20 | 0 | | 41 | 61 | 91 | 135 | 295 | 647 |
| 20 | 1 | | 93 | 138 | 205 | 303 | 665 | 1457 |
| 20 | 2 | | 145 | 215 | 319 | 472 | 1034 | 2266 |
| 20 | 3 | First 30 Years $1 thereafter | 197 | 245 | 363 | 536 | 1176 | 2557 |
| 30 | 0 | | 62 | 92 | 137 | 202 | 443 | 971 |
| 30 | 1 | | 114 | 169 | 250 | 371 | 813 | 1780 |
| 30 | 2 | | 166 | 246 | 364 | 539 | 1182 | 2590 |
| 30 | 3 | First 30 Years $1 thereafter | 218 | 276 | 408 | 604 | 1324 | 2880 |
| 40 | 0 | | 83 | 123 | 182 | 270 | 591 | 1295 |
| 40 | 1 | | 135 | 200 | 296 | 438 | 960 | 2104 |
| 40 | 2 | | 187 | 277 | 410 | 607 | 1330 | 2914 |
| 40 | 3 | First 30 Years $1 thereafter | 239 | 306 | 454 | 671 | 1471 | 3204 |
| 50 | 0 | | 104 | 154 | 228 | 337 | 739 | 1619 |
| 50 | 1 | | 156 | 231 | 342 | 506 | 1108 | 2428 |
| 50 | 2 | | 208 | 308 | 456 | 674 | 1477 | 3237 |
| 50 | 3 | First 30 Years $1 thereafter | 260 | 337 | 499 | 739 | 1619 | 3528 |

**TABLE 17.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $70 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 18 | 26 | 39 | 58 | 127 | 277 |
| 10 | 1 | | 62 | 92 | 137 | 202 | 443 | 971 |
| 10 | 2 | | 107 | 158 | 234 | 347 | 760 | 1665 |
| 10 | 3 | First 30 Years $1 thereafter | 152 | 183 | 272 | 402 | 881 | 1914 |
| 20 | 0 | | 36 | 53 | 78 | 116 | 253 | 555 |
| 20 | 1 | | 80 | 119 | 177 | 260 | 570 | 1249 |
| 20 | 2 | | 125 | 185 | 273 | 405 | 887 | 1943 |
| 20 | 3 | First 30 Years $1 thereafter | 169 | 210 | 311 | 460 | 1008 | 2191 |
| 30 | 0 | | 53 | 79 | 117 | 173 | 380 | 832 |
| 30 | 1 | | 98 | 145 | 215 | 318 | 697 | 1526 |
| 30 | 2 | | 143 | 211 | 312 | 462 | 1013 | 2220 |
| 30 | 3 | First 30 Years $1 thereafter | 187 | 236 | 350 | 518 | 1135 | 2469 |
| 40 | 0 | | 71 | 105 | 156 | 231 | 507 | 1110 |
| 40 | 1 | | 116 | 171 | 254 | 376 | 823 | 1804 |
| 40 | 2 | | 160 | 237 | 351 | 520 | 1140 | 2497 |
| 40 | 3 | First 30 Years $1 thereafter | 205 | 263 | 389 | 576 | 1261 | 2746 |
| 50 | 0 | | 89 | 132 | 195 | 289 | 633 | 1387 |
| 50 | 1 | | 134 | 198 | 293 | 433 | 950 | 2081 |
| 50 | 2 | | 178 | 264 | 391 | 578 | 1267 | 2775 |
| 50 | 3 | First 30 Years $1 thereafter | 223 | 289 | 428 | 633 | 1388 | 3024 |

**TABLE 18.—Board Feet of Lumber per Acre Necessary to Pay Current Specified Year's Costs at 4 Percent Interest and $80 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 16 | 23 | 34 | 51 | 111 | 243 |
| 10 | 1 | | 55 | 81 | 119 | 177 | 388 | 850 |
| 10 | 2 | | 94 | 138 | 205 | 303 | 665 | 1457 |
| 10 | 3 | First 30 Years $1 thereafter | 133 | 161 | 238 | 352 | 771 | 1675 |
| 20 | 0 | | 31 | 46 | 68 | 101 | 222 | 486 |
| 20 | 1 | | 70 | 104 | 154 | 227 | 498 | 1093 |
| 20 | 2 | | 109 | 161 | 239 | 354 | 776 | 1700 |
| 20 | 3 | First 30 Years $1 thereafter | 148 | 184 | 272 | 402 | 882 | 1917 |
| 30 | 0 | | 47 | 69 | 102 | 152 | 332 | 728 |
| 30 | 1 | | 86 | 127 | 188 | 278 | 609 | 1335 |
| 30 | 2 | | 125 | 185 | 273 | 405 | 887 | 1942 |
| 30 | 3 | First 30 Years $1 thereafter | 164 | 207 | 306 | 453 | 893 | 2160 |
| 40 | 0 | | 62 | 92 | 137 | 202 | 443 | 971 |
| 40 | 1 | | 101 | 150 | 222 | 329 | 720 | 1578 |
| 40 | 2 | | 140 | 208 | 307 | 455 | 997 | 2185 |
| 40 | 3 | First 30 Years $1 thereafter | 179 | 230 | 340 | 504 | 1104 | 2403 |
| 50 | 0 | | 78 | 115 | 171 | 253 | 554 | 1214 |
| 50 | 1 | | 117 | 173 | 256 | 379 | 831 | 1821 |
| 50 | 2 | | 156 | 231 | 342 | 506 | 1108 | 2428 |
| 50 | 3 | First 30 Years $1 thereafter | 195 | 253 | 374 | 554 | 1214 | 2646 |

**TABLE 19.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $20 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 1,100 | 1,900 | 3,050 | 4,750 | 11,000 | 24,750 |
| 10 | 1 | | 4,000 | 6,850 | 11,000 | 17,150 | 39,650 | 89,100 |
| 10 | 2 | | 6,950 | 11,800 | 18,950 | 29,500 | 68,400 | 153,450 |
| 10 | 3 | First 30 Years $1 thereafter | 9,850 | 15,450 | 23,750 | 36,050 | 81,100 | 180,000 |
| 20 | 0 | | 2,250 | 3,800 | 6,100 | 9,500 | 22,050 | 49,500 |
| 20 | 1 | | 5,150 | 8,750 | 14,050 | 21,900 | 50,700 | 113,850 |
| 20 | 2 | | 8,100 | 13,700 | 22,000 | 34,250 | 79,450 | 178,200 |
| 20 | 3 | First 30 Years $1 thereafter | 11,000 | 17,350 | 26,800 | 40,800 | 92,150 | 204,750 |
| 30 | 0 | | 3,350 | 5,700 | 9,150 | 14,300 | 33,050 | 74,250 |
| 30 | 1 | | 6,250 | 10,650 | 17,100 | 26,700 | 61,700 | 138,600 |
| 30 | 2 | | 9,200 | 15,600 | 25,050 | 39,050 | 90,450 | 202,950 |
| 30 | 3 | First 30 Years $1 thereafter | 12,100 | 19,250 | 29,850 | 45,600 | 103,150 | 229,500 |
| 40 | 0 | | 4,500 | 7,600 | 12,200 | 19,050 | 44,100 | 99,000 |
| 40 | 1 | | 7,400 | 12,550 | 20,150 | 31,450 | 72,750 | 163,350 |
| 40 | 2 | | 10,350 | 17,500 | 28,100 | 43,800 | 101,500 | 227,700 |
| 40 | 3 | First 30 Years $1 thereafter | 13,250 | 21,150 | 32,900 | 50,350 | 114,200 | 254,250 |
| 50 | 0 | | 5,600 | 9,500 | 15,250 | 23,800 | 55,100 | 123,750 |
| 50 | 1 | | 8,500 | 14,450 | 23,200 | 36,200 | 83,750 | 188,100 |
| 50 | 2 | | 11,450 | 19,400 | 31,150 | 48,550 | 112,500 | 252,450 |
| 50 | 3 | First 30 Years $1 thereafter | 14,350 | 23,050 | 35,950 | 55,100 | 125,200 | 279,000 |

**TABLE 20.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $30 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 733 | 1,267 | 2,033 | 3,166 | 7,333 | 16,500 |
| 10 | 1 | | 2,667 | 4,567 | 7,333 | 11,433 | 26,433 | 59,400 |
| 10 | 2 | | 4,633 | 7,867 | 12,633 | 19,667 | 45,600 | 102,300 |
| 10 | 3 | First 30 Years $1 thereafter | 6,567 | 10,300 | 15,833 | 24,033 | 54,067 | 120,000 |
| 20 | 0 | | 1,500 | 2,533 | 4,066 | 6,333 | 14,700 | 33,000 |
| 20 | 1 | | 3,433 | 5,833 | 9,367 | 14,600 | 33,800 | 75,900 |
| 20 | 2 | | 5,400 | 9,133 | 14,667 | 22,833 | 52,967 | 118,800 |
| 20 | 3 | First 30 Years $1 thereafter | 7,333 | 11,567 | 17,867 | 27,200 | 61,433 | 136,500 |
| 30 | 0 | | 2,233 | 3,800 | 6,100 | 9,533 | 22,033 | 49,500 |
| 30 | 1 | | 4,167 | 7,100 | 11,400 | 17,800 | 41,133 | 92,400 |
| 30 | 2 | | 6,133 | 10,400 | 16,700 | 26,033 | 60,300 | 135,300 |
| 30 | 3 | First 30 Years $1 thereafter | 8,067 | 12,833 | 19,900 | 30,400 | 68,767 | 153,000 |
| 40 | 0 | | 3,000 | 5,067 | 8,133 | 12,700 | 29,400 | 66,000 |
| 40 | 1 | | 4,933 | 8,367 | 13,433 | 20,967 | 48,500 | 108,900 |
| 40 | 2 | | 6,900 | 11,667 | 18,733 | 29,200 | 67,667 | 151,800 |
| 40 | 3 | First 30 Years $1 thereafter | 8,833 | 14,100 | 21,933 | 33,567 | 76,133 | 169,500 |
| 50 | 0 | | 3,733 | 6,333 | 10,167 | 15,867 | 36,733 | 82,500 |
| 50 | 1 | | 5,633 | 9,633 | 15,467 | 24,133 | 55,833 | 125,400 |
| 50 | 2 | | 7,633 | 12,933 | 20,767 | 32,367 | 75,000 | 168,300 |
| 50 | 3 | First 30 Years $1 thereafter | 9,567 | 15,367 | 23,967 | 36,733 | 83,467 | 186,000 |

**TABLE 21.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $40 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 550 | 950 | 1,525 | 2,375 | 5,500 | 12,375 |
| 10 | 1 | | 2,000 | 3,425 | 5,525 | 8,575 | 19,825 | 44,550 |
| 10 | 2 | | 3,475 | 5,900 | 9,475 | 14,750 | 34,200 | 76,725 |
| 10 | 3 | First 30 Years $1 thereafter | 4,925 | 7,725 | 11,875 | 18,025 | 40,550 | 90,000 |
| 20 | 0 | | 1,125 | 1,900 | 3,050 | 4,750 | 11,025 | 24,750 |
| 20 | 1 | | 2,575 | 4,375 | 7,025 | 10,950 | 25,350 | 56,925 |
| 20 | 2 | | 4,050 | 6,850 | 11,000 | 17,125 | 39,725 | 89,100 |
| 20 | 3 | First 30 Years $1 thereafter | 5,500 | 8,675 | 13,400 | 20,400 | 46,075 | 102,375 |
| 30 | 0 | | 1,675 | 2,850 | 4,575 | 7,150 | 16,525 | 37,125 |
| 30 | 1 | | 3,150 | 5,300 | 8,550 | 13,325 | 30,850 | 69,300 |
| 30 | 2 | | 4,600 | 7,800 | 12,525 | 19,525 | 45,225 | 101,475 |
| 30 | 3 | First 30 Years $1 thereafter | 6,050 | 9,625 | 14,925 | 22,800 | 51,575 | 114,750 |
| 40 | 0 | | 2,250 | 3,800 | 6,100 | 9,525 | 22,050 | 49,500 |
| 40 | 1 | | 3 700 | 6,275 | 10,075 | 15,725 | 36,375 | 81,675 |
| 40 | 2 | | 5,175 | 8,750 | 14,050 | 21,900 | 50,750 | 113,850 |
| 40 | 3 | First 30 Years $1 thereafter | 6,675 | 10,575 | 16,450 | 25,175 | 57,100 | 127,125 |
| 50 | 0 | | 2,800 | 4,750 | 7,625 | 11,900 | 27,550 | 61,875 |
| 50 | 1 | | 4,250 | 7,225 | 11,600 | 18,100 | 41,875 | 94,050 |
| 50 | 2 | | 5,750 | 9,700 | 15,575 | 24,275 | 56,250 | 126,225 |
| 50 | 3 | First 30 Years $1 thereafter | 7,175 | 11,525 | 17,975 | 27,550 | 62,600 | 139,500 |

**TABLE 22.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $50 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 440 | 760 | 1,220 | 1,900 | 4,400 | 9,900 |
| 10 | 1 | | 1,600 | 2,740 | 4,400 | 6,860 | 15,860 | 35,640 |
| 10 | 2 | | 2,780 | 4,720 | 7,580 | 11,800 | 27,360 | 61,380 |
| 10 | 3 | First 30 Years $1 thereafter | 3,940 | 6,180 | 9,500 | 14,420 | 32,440 | 72,000 |
| 20 | 0 | | 900 | 1,520 | 2,440 | 3,800 | 8,820 | 19,800 |
| 20 | 1 | | 2,060 | 3,500 | 5,620 | 8,760 | 20,280 | 45,540 |
| 20 | 2 | | 3,240 | 5,480 | 8,800 | 13,700 | 31,780 | 71,280 |
| 20 | 3 | First 30 Years $1 thereafter | 4,400 | 6,940 | 10,720 | 16,320 | 36,860 | 81,900 |
| 30 | 0 | | 1,340 | 2,280 | 3,660 | 5,720 | 13,220 | 29,700 |
| 30 | 1 | | 2,500 | 4,260 | 6,840 | 10,680 | 24,680 | 55,440 |
| 30 | 2 | | 3,680 | 6,240 | 10,020 | 15,620 | 36,180 | 81,180 |
| 30 | 3 | First 30 Years $1 thereafter | 4,840 | 7,700 | 11,940 | 18,240 | 41,260 | 91,800 |
| 40 | 0 | | 1,800 | 3,040 | 4,880 | 7,620 | 17,640 | 39,600 |
| 40 | 1 | | 2,960 | 5,020 | 8,060 | 12,580 | 29,100 | 65,340 |
| 40 | 2 | | 4,140 | 7,000 | 11,240 | 17,520 | 40,600 | 91,080 |
| 40 | 3 | First 30 Years $1 thereafter | 5,300 | 8,460 | 13,160 | 20,140 | 45,680 | 101,700 |
| 50 | 0 | | 2,240 | 3,800 | 6,100 | 9,520 | 22,040 | 49,500 |
| 50 | 1 | | 3,400 | 5,780 | 9,280 | 14,480 | 33,500 | 75,240 |
| 50 | 2 | | 4,580 | 7,760 | 12,460 | 19,420 | 45,000 | 100,980 |
| 50 | 3 | First 30 Years $1 thereafter | 5,740 | 9,220 | 14,380 | 22,040 | 50,080 | 111,600 |

**TABLE 23.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $60 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 367 | 633 | 1,017 | 1,583 | 3,667 | 8,250 |
| 10 | 1 | | 1,333 | 2,283 | 3,667 | 5,717 | 13,217 | 29,700 |
| 10 | 2 | | 2,317 | 3,933 | 6,317 | 9,833 | 22,800 | 51,150 |
| 10 | 3 | First 30 Years $1 thereafter | 3,283 | 5,150 | 7,917 | 12,017 | 27,033 | 60,000 |
| 20 | 0 | | 750 | 1,267 | 2,033 | 3,167 | 7,350 | 16,500 |
| 20 | 1 | | 1,717 | 2,917 | 4,683 | 7,300 | 16,900 | 37,950 |
| 20 | 2 | | 2,700 | 4,567 | 7,333 | 11,417 | 26,453 | 59,400 |
| 20 | 3 | First 30 Years $1 thereafter | 3,667 | 5,783 | 8,933 | 13,600 | 30,717 | 68,250 |
| 30 | 0 | | 1,117 | 1,900 | 3,050 | 4,767 | 11,017 | 24,750 |
| 30 | 1 | | 2,083 | 3,500 | 5,700 | 8,900 | 20,567 | 46,200 |
| 30 | 2 | | 3,067 | 5,200 | 8,350 | 13,017 | 30,150 | 67,650 |
| 30 | 3 | First 30 Years $1 thereafter | 4,033 | 6,417 | 9,950 | 15,200 | 34,383 | 76,500 |
| 40 | 0 | | 1,500 | 2,533 | 4,067 | 6,350 | 14,700 | 33,000 |
| 40 | 1 | | 2,467 | 4,183 | 6,717 | 10,483 | 24,250 | 54,450 |
| 40 | 2 | | 3,450 | 5,833 | 9,367 | 14,600 | 33,833 | 75,900 |
| 40 | 3 | First 30 Years $1 thereafter | 4,417 | 7,050 | 10,967 | 16,783 | 38,067 | 84,750 |
| 50 | 0 | | 1,867 | 3,167 | 5,083 | 7,933 | 18,367 | 41,250 |
| 50 | 1 | | 2,817 | 4,817 | 7,733 | 12,067 | 27,917 | 62,700 |
| 50 | 2 | | 3,817 | 6,467 | 10,383 | 16,183 | 37,500 | 84,150 |
| 50 | 3 | First 30 Years $1 thereafter | 4,783 | 7,683 | 11,983 | 18,367 | 41,733 | 93,000 |

**TABLE 24.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $70 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 314 | 543 | 871 | 1,357 | 3,143 | 7,071 |
| 10 | 1 | | 1,143 | 1,957 | 3,143 | 4,900 | 11,329 | 25,457 |
| 10 | 2 | | 1,986 | 3,371 | 5,414 | 8,429 | 19,543 | 43,843 |
| 10 | 3 | First 30 Years $1 thereafter | 2,814 | 4,414 | 6,786 | 10,300 | 23,171 | 51,429 |
| 20 | 0 | | 643 | 1,086 | 1,743 | 2,714 | 6,300 | 14,143 |
| 20 | 1 | | 1,471 | 2,500 | 4,014 | 6,257 | 14,486 | 32,529 |
| 20 | 2 | | 2,314 | 3,914 | 6,286 | 9,786 | 22,700 | 50,914 |
| 20 | 3 | First 30 Years $1 thereafter | 3,143 | 4,957 | 7,657 | 11,657 | 26,329 | 58,500 |
| 30 | 0 | | 959 | 1,629 | 2,614 | 4,086 | 9,443 | 21,214 |
| 30 | 1 | | 1,786 | 3,043 | 4,886 | 7,629 | 17,629 | 39,600 |
| 30 | 2 | | 2,628 | 4,457 | 7,157 | 11,157 | 25,843 | 57,982 |
| 30 | 3 | First 30 Years $1 thereafter | 3,457 | 5,500 | 8,529 | 13,029 | 29,486 | 65,571 |
| 40 | 0 | | 1,286 | 2,171 | 3,486 | 5,443 | 12,600 | 28,286 |
| 40 | 1 | | 2,114 | 3,586 | 5,757 | 8,986 | 20,786 | 46,671 |
| 40 | 2 | | 2,957 | 5,000 | 8,029 | 12,514 | 29,000 | 65,057 |
| 40 | 3 | First 30 Years $1 thereafter | 3,786 | 6,043 | 9,400 | 14,386 | 32,629 | 72,643 |
| 50 | 0 | | 1,600 | 2,714 | 4,357 | 6,800 | 15,743 | 35,357 |
| 50 | 1 | | 2,429 | 4,129 | 6,629 | 10,343 | 23,929 | 53,743 |
| 50 | 2 | | 3,271 | 5,543 | 8,900 | 13,871 | 32,143 | 72,129 |
| 50 | 3 | First 30 Years $1 thereafter | 4,100 | 6,586 | 10,271 | 15,743 | 35,771 | 79,714 |

**TABLE 25.—Board Feet of Lumber per Acre Necessary at Various Harvest Dates to Pay Accumulated Costs at 4 Percent Interest and $80 per M.B.F.**

| Land Value per Acre | Other Yearly Costs per Acre | | Harvest at End of Year | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 30 | 40 | 50 | 60 | 80 | 100 |
| | | | Board Feet | | | | | |
| $10 | $0 | | 275 | 475 | 762 | 1,187 | 2,750 | 6,187 |
| 10 | 1 | | 1,000 | 1,712 | 2,750 | 4,287 | 9,912 | 22,275 |
| 10 | 2 | | 1,737 | 2,950 | 4,737 | 7,375 | 17,100 | 38,362 |
| 10 | 3 | First 30 Years $1 thereafter | 2,462 | 3,862 | 5,937 | 9,012 | 20,275 | 45,000 |
| 20 | 0 | | 562 | 950 | 1,525 | 2,375 | 5,512 | 12,375 |
| 20 | 1 | | 1,287 | 2,187 | 3,512 | 5,475 | 12,675 | 28,462 |
| 20 | 2 | | 2,025 | 3,425 | 5,500 | 8,562 | 19,862 | 44,550 |
| 20 | 3 | First 30 Years $1 thereafter | 2,750 | 4,337 | 6,700 | 10,200 | 23,037 | 51,187 |
| 30 | 0 | | 837 | 1,425 | 2,287 | 3,575 | 8,262 | 18,562 |
| 30 | 1 | | 1,575 | 2,662 | 4,275 | 6,662 | 15,425 | 34,650 |
| 30 | 2 | | 2,300 | 3,900 | 6,262 | 9,762 | 22,612 | 50,737 |
| 30 | 3 | First 30 Years $1 thereafter | 3,025 | 4,812 | 7,462 | 11,400 | 25,787 | 57,375 |
| 40 | 0 | | 1,125 | 1,900 | 3,050 | 4,762 | 11,025 | 24,750 |
| 40 | 1 | | 1,850 | 3,137 | 5,037 | 7,862 | 18,187 | 40,837 |
| 40 | 2 | | 2,587 | 4,375 | 7,025 | 10,950 | 25,375 | 56,925 |
| 40 | 3 | First 30 Years $1 thereafter | 3,337 | 5,287 | 8,225 | 12,587 | 28,550 | 63,562 |
| 50 | 0 | | 1,400 | 2,375 | 3,812 | 5,950 | 13,775 | 30,937 |
| 50 | 1 | | 2,150 | 3,612 | 5,800 | 9,050 | 20,937 | 47,025 |
| 50 | 2 | | 2,875 | 4,850 | 7,787 | 12,137 | 28,125 | 63,112 |
| 50 | 3 | First 30 Years $1 thereafter | 3,587 | 5,762 | 8,987 | 13,775 | 31,300 | 69,750 |

**TABLE 26.—Net Income or Loss per Acre Which Would Be Realized from Timber at Specified Year of Age, Specified Value per M.B.F., and at Specified Costs with Interest at 4 Percent. Yields Based on Table 2, International Rule, U.S.D.A. Technical Bulletin 560.***

| Age of Stand Year | Site Index 40 | Site Index 50 | | Site Index 60 | | Site Index 70 | | Site Index 80 | |
|---|---|---|---|---|---|---|---|---|---|
| | $0 Land Value $1 Upkeep | $10 Land $1 Upkeep | $20 Land $1 Upkeep | $30 Land $1 Upkeep | $30 Land $2 Upkeep | $40 Land $1 Upkeep | $40 Land $2 Upkeep | $50 Land $1 Upkeep | $50 Land $2 Upkeep |
| | | | | $20 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—77 | $—109 | $—85 | $—116 |
| 30 | —57 | —75 | —97 | —120 | —169 | —114 | —173 | —105 | —164 |
| 40 | —88 | —110 | —148 | —149 | —250 | —142 | —242 | —118 | —218 |
| 50 | —132 | —156 | —217 | —217 | —377 | —209 | —369 | —190 | —350 |
| 60 | —195 | —232 | —327 | —340 | —589 | —351 | —600 | —352 | —601 |
| 70 | —294 | —362 | —507 | —560 | —939 | —608 | —987 | —646 | —1025 |
| 80 | —456 | —585 | —806 | —923 | —1497 | —1032 | —1606 | —1132 | —1706 |
| 90 | —709 | —940 | —1271 | —1489 | —2350 | —1696 | —2557 | —1898 | —2759 |
| 100 | —1104 | —1489 | —1994 | —2355 | —3643 | —2735 | —4023 | —3075 | —4364 |
| | | | | $30 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—75 | $—107 | $—81 | $—112 |
| 30 | —56 | —71 | —93 | —111 | —160 | —96 | —155 | —71 | —130 |
| 40 | —82 | —96 | —134 | —117 | —218 | —87 | —187 | —32 | —132 |
| 50 | —118 | —123 | —184 | —154 | —314 | —111 | —271 | —52 | —212 |
| 60 | —168 | —176 | —271 | —243 | —492 | —212 | —461 | —166 | —415 |
| 70 | —253 | —282 | —426 | —432 | —811 | —431 | —810 | —415 | —794 |
| 80 | —407 | —480 | —701 | —766 | —1340 | —820 | —1394 | —859 | —1433 |
| 90 | —633 | —814 | —1145 | —1306 | —2167 | —1451 | —2312 | —1588 | —2449 |
| 100 | —1012 | —1342 | —1847 | —2146 | —3434 | —2441 | —3726 | —2731 | —4020 |

*For yields differing from these, adjustments would be necessary by the difference in yield times the given price per M.B.F. For example, if improvement work resulted in 5000 board feet increase at 80 years, the increased income would be 5 times M.B.F. price less any added costs involved above those stipulated in the tables.

**TABLE 26. (Continued)—Net Income or Loss per Acre Which Would Be Realized from Timber at Specified Year of Age, Specified Value per M.B.F., and at Specified Costs with Interest at 4 Percent. Yields Based on Table 2, International Rule, U.S.D.A. Technical Bulletin 560.***

| Age of Stand Year | Site Index 40 | Site Index 50 | | Site Index 60 | | Site Index 70 | | Site Index 80 | |
|---|---|---|---|---|---|---|---|---|---|
| | $0 Land Value $1 Upkeep | $10 Land $1 Upkeep | $20 Land $1 Upkeep | $30 Land $1 Upkeep | $30 Land $2 Upkeep | $40 Land $1 Upkeep | $40 Land $2 Upkeep | $50 Land $1 Upkeep | $50 Land $2 Upkeep |
| | | | | $40 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—74 | $—106 | $—78 | $—109 |
| 30 | —55 | —68 | —90 | —93 | —152 | —79 | —138 | —38 | —97 |
| 40 | —76 | —82 | —120 | —85 | —186 | —32 | —132 | +54 | —46 |
| 50 | —104 | —91 | —152 | —91 | —251 | —14 | —174 | +85 | —75 |
| 60 | —141 | —120 | —215 | —146 | —395 | —73 | —322 | +20 | —299 |
| 70 | —209 | —199 | —344 | —304 | —683 | —256 | —635 | —184 | —563 |
| 80 | —338 | —376 | —597 | —610 | —1184 | —608 | —1182 | —587 | —1161 |
| 90 | —557 | —688 | —1019 | —1123 | —1984 | —1206 | —2067 | —1279 | —2140 |
| 100 | —920 | —1195 | —1690 | —1937 | —3225 | —2202 | —3490 | —2387 | —3676 |
| | | | | $50 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—72 | $—104 | $—74 | $—105 |
| 30 | —54 | —64 | —86 | —84 | —143 | —61 | —120 | —4 | —63 |
| 40 | —70 | —68 | —106 | —43 | —154 | —23 | —77 | +140 | +40 |
| 50 | —90 | —58 | —119 | —28 | —188 | +84 | —76 | +223 | +63 |
| 60 | —114 | —64 | —159 | —49 | —298 | +66 | —183 | +206 | —43 |
| 70 | —166 | —118 | —263 | —176 | —555 | —79 | —458 | +47 | —332 |
| 80 | —289 | —271 | —492 | —453 | —1027 | —396 | —970 | —314 | —888 |
| 90 | —481 | —562 | —893 | —940 | —1801 | —961 | —1822 | —970 | —1831 |
| 100 | —828 | —1048 | —1543 | —1728 | —3016 | —1905 | —3193 | —2043 | —3332 |

*For yields differing from these, adjustments would be necessary by the difference in yield times the given price per M.B.F. For example, if improvement work resulted in 5000 board feet increase at 80 years, the increased income would be 5 times M.B.F. price less any added costs involved above those stipulated in the tables.

**TABLE 26. (Continued)—Net Income or Loss per Acre Which Would Be Realized from Timber at Specified Year of Age, Specified Value per M.B.F., and at Specified Costs with Interest at 4 Percent. Yields Based on Table 2, International Rule, U.S.D.A. Technical Bulletin 560.***

| Age of Stand Year | Site Index 40 $0 Land Value $1 Upkeep | Site Index 50 $10 Land $1 Upkeep | Site Index 50 $20 Land $1 Upkeep | Site Index 60 $30 Land $1 Upkeep | Site Index 60 $30 Land $2 Upkeep | Site Index 70 $40 Land $1 Upkeep | Site Index 70 $40 Land $2 Upkeep | Site Index 80 $50 Land $1 Upkeep | Site Index 80 $50 Land $2 Upkeep |
|---|---|---|---|---|---|---|---|---|---|
| | | | | $60 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—71 | $—103 | $—71 | $—101 |
| 30 | —53 | —61 | —83 | —76 | —135 | —44 | —103 | +29 | —30 |
| 40 | —64 | —54 | —94 | —21 | —122 | +78 | —22 | +226 | +126 |
| 50 | —76 | —26 | —87 | +35 | —125 | +181 | +21 | +360 | +200 |
| 60 | —87 | —8 | —103 | +48 | —201 | +205 | —44 | +392 | +143 |
| 70 | —124 | —37 | —182 | —48 | —427 | +98 | —281 | +278 | —101 |
| 80 | —220 | —167 | —388 | —297 | —871 | —184 | —758 | —42 | —616 |
| 90 | —405 | —436 | —767 | —757 | —1618 | —716 | —1577 | —661 | —1522 |
| 100 | —736 | —901 | —1396 | —1519 | —2807 | —1608 | —2897 | —1689 | —2978 |
| | | | | $70 per M.B.F. | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—69 | $—101 | $—67 | $—98 |
| 30 | —52 | —57 | —79 | —67 | —126 | —26 | —85 | +63 | +4 |
| 40 | —58 | —39 | —77 | +9 | —90 | +133 | +33 | +312 | +212 |
| 50 | —62 | +7 | —54 | +98 | —62 | +279 | +119 | +498 | +338 |
| 60 | —60 | +48 | —47 | +145 | —104 | +344 | +95 | +578 | +329 |
| 70 | —81 | +45 | —101 | +80 | —299 | +275 | —104 | +509 | +130 |
| 80 | —158 | —62 | —283 | —140 | —714 | +28 | —546 | +231 | —343 |
| 90 | —329 | —310 | —641 | —574 | —1435 | —471 | —1332 | —352 | —1213 |
| 100 | —644 | —754 | —1249 | —1310 | —2598 | —1332 | —2623 | —1355 | —2644 |

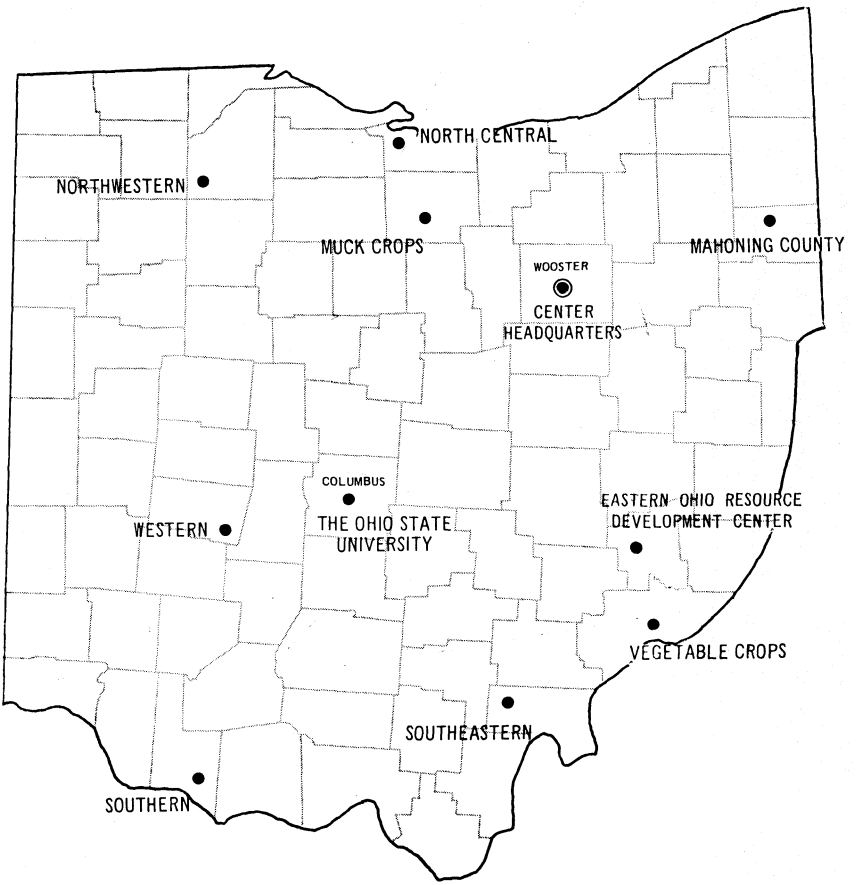
*For yields differing from these, adjustments would be necessary by the difference in yield times the given price per M.B.F. For example, if improvement work resulted in 5000 board feet increase at 80 years, the increased income would be 5 times M.B.F. price less any added costs involved above those stipulated in the tables.

**TABLE 26. (Continued)—Net Income or Loss per Acre Which Would Be Realized from Timber at Specified Year of Age, Specified Value per M.B.F., and at Specified Costs with Interest at 4 Percent. Yields Based on Table 2, International Rule, U.S.D.A. Technical Bulletin 560.***

| Age of Stand Year | Site Index 40 $0 Land Value $1 Upkeep | Site Index 50 $10 Land $1 Upkeep | Site Index 50 $20 Land $1 Upkeep | Site Index 60 $30 Land $1 Upkeep | Site Index 60 $30 Land $2 Upkeep | Site Index 70 $40 Land $1 Upkeep | Site Index 70 $40 Land $2 Upkeep | Site Index 80 $50 Land $1 Upkeep | Site Index 80 $50 Land $2 Upkeep |
|---|---|---|---|---|---|---|---|---|---|
| | | | | $80 per M.B.F | | | | | |
| 20 | $—— | $—— | $—— | $—— | $—— | $—68 | $—100 | $—64 | $—95 |
| 30 | —51 | —54 | —76 | —59 | —118 | —9 | —68 | +96 | +37 |
| 40 | —52 | —36 | —64 | +43 | —58 | +188 | +88 | +402 | +298 |
| 50 | —48 | +41 | —22 | +161 | +1 | +376 | +216 | +635 | +475 |
| 60 | —33 | +104 | +9 | +242 | —7 | +483 | +234 | +764 | +515 |
| 70 | —39 | +126 | —20 | +208 | —171 | +452 | +73 | +740 | +361 |
| 80 | —102 | +42 | —179 | +16 | —558 | +240 | —334 | +503 | —71 |
| 90 | —253 | —184 | —515 | —391 | —1252 | —226 | —1087 | —43 | —904 |
| 100 | —552 | —607 | —1102 | —1101 | —2389 | —1136 | —2424 | —1101 | —2300 |

*For yields differing from these, adjustments would be necessary by the difference in yield times the given price per M.B.F. For example, if improvement work resulted in 5000 board feet increase at 80 years, the increased income would be 5 times M.B.F. price less any added costs involved above those stipulated in the tables.

# The State Is the Campus for Agricultural Research and Development




Ohio's major soil types and climatic conditions are represented at the Research Center's 11 locations. Thus, Center scientists can make field tests under conditions similar to those encountered by Ohio farmers.

Research is conducted by 13 departments on more than 6000 acres at Center headquarters in Wooster, nine branches, and The Ohio State University.

Center Headquarters, Wooster, Wayne County: 1918 acres

Eastern Ohio Resource Development Center, Caldwell, Noble County: 2053 acres

Mahoning County Experiment Farm, Canfield: 275 acres

Muck Crops Branch, Willard, Huron County: 15 acres

North Central Branch, Vickery, Erie County: 335 acres

Northwestern Branch, Hoytville, Wood County: 247 acres

Southeastern Branch, Carpenter, Meigs County: 330 acres

Southern Branch, Ripley, Brown County: 275 acres

Vegetable Crops Branch, Marietta, Washington County: 20 acres

Western Branch, South Charleston, Clark County: 428 acres